

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 24180 PC 00	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/NO2003/000433	International filing date (<i>day/month/year</i>) 22.12.2003	Priority date (<i>day/month/year</i>) 23.12.2002
International Patent Classification (IPC) or national classification and IPC F17B 1/14, B01D 5/00, B65D 90/30		

Applicant

KNUTSEN OAS SHIPPING AS et al

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

- a. (*sent to the applicant and to the International Bureau*) a total of 1 sheets, as follows:
- sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

- b. (*sent to the International Bureau only*) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Box No. I Basis of the report |
| <input type="checkbox"/> | Box No. II Priority |
| <input type="checkbox"/> | Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI Certain documents cited |
| <input type="checkbox"/> | Box No. VII Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII Certain observations on the international application |

Date of submission of the demand 09.06.2004	Date of completion of this report 16.12.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Leif Vingård / JA A Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2003/000433

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- international search (under Rules 12.3 and 23.1(b))
- publication of the international application (under Rule 12.4)
- international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages 1 - 5 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 6 _____ received by this Authority on 14.10.2004

pages* _____ received by this Authority on _____

the drawings:

pages 1 - 2 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to the sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2003/000433

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	<u>1-2</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1-2</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1-2</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)**Documents cited in the International Search Report:**

- D1: US 3068657 A
 D2: US 2944405 A
 D3: US 3369371 A

The cited documents represent the general state of the art. The invention defined in claims 1-2 is not disclosed by any of these documents.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed condensing device. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-2 is novel and is considered to involve an inventive step. The invention is industrially applicable.

C l a i m s

1. A device for condensing volatile organic compounds (VOC) from a storage or transport tank (4) into oil from the same or another storage or transport tank (4) via a downcomer (6), characterized in that the upper part (8) of the downcomer (6), which upper part has a cross sectional area that is substantially unreduced, is connected to a gas pipe (14), the gas pipe (14) communicating with the upper part (16) of the storage or transport tank (4), and where the upper part (8) of the downcomer (6) is arranged at a sufficient height above the upper part (16) of the storage or transport tank (4) to cause an inflow of gas from the upper part (16) of the storage or transport tank (4) due to the underpressure being created in the upper part (8) of the downcomer (6) when oil flows down through the downcomer (6).
2. A device in accordance with Claim 1, characterized in that it comprises a cooler (12) arranged upstream the upper part (8) of the downcomer (6) so that the oil will flow through said cooler (12) prior to flowing into the upper part (8) of the downcomer (6).